

IN THE CLAIMS

This listing of claims will replace all prior listings of claims in the application.

Listing of Claims

1. (Original) A system for driving a nematic liquid crystal in a liquid crystal display device in which the nematic liquid crystal is confined between a common electrode and a segment electrode that are placed between two polarizing plates, comprising:

first means for applying a sequence of selection pulses to said common electrode;

second means responsive to said selection pulses to apply to said segment electrode a voltage having a value corresponding to image data to be displayed; and

third means for changing the value of the voltage applied to said segment electrode during intervals where said selection pulses are not applied so that the value thereof is different from the value corresponding to the image data,

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said nematic liquid crystal having electro-optical characteristics that cause transmittance of said display device to change substantially linearly in response to an applied voltage level.

2. (Currently Amended) The system for driving a nematic liquid crystal according to Claim 1, wherein said second means and said third means are switched in response to intervals of said selection pulses.

3. (Original) The system for driving a nematic liquid crystal according to Claim 1, wherein said voltages applied to said common electrode and said segment electrode are determined to invert a voltage applied to said liquid crystal soon after each said selection pulse is applied to said common electrode.

4. (Original) The system for driving a nematic liquid crystal according to Claim 2, wherein said voltages applied to said common electrode and said segment electrode are determined to invert a voltage applied to said liquid crystal soon after each said selection pulse is applied to said common electrode.

5. (Original) The system for driving a nematic liquid crystal according to Claim 1, further comprising means for heating said nematic liquid crystal to a predetermined temperature.

6. (Original) The system for driving a nematic liquid crystal according to Claim 4, further comprising means for heating said nematic liquid crystal to a predetermined temperature.

Al Cont 7. (Original) A method for driving a nematic liquid crystal in a liquid crystal display device in which the nematic liquid crystal is confined between a common electrode and a segment electrode that are placed between two polarizing plates, comprising the steps of:

applying a sequence of selection pulses to said common electrode;

in response to said selection pulses, applying to said segment electrode a first voltage corresponding to image data to be displayed; and

applying a second voltage of a constant value independent from the image data to said segment electrode in intervals where said selection pulses are not applied.

8. (Original) The method for driving a nematic liquid crystal according to Claim 7, wherein said first voltage and

said second voltage are switched in response to intervals of said selection pulses.

9. (Original) The method for driving a nematic liquid crystal according to Claim 7, wherein a voltage difference between said common electrode and said segment electrode is determined to invert a voltage applied to said liquid crystal soon after each said selection pulse is applied to said common electrode.

10. (Original) The method for driving a nematic liquid crystal according to Claim 8, wherein a voltage difference between said common electrode and said segment electrode is determined to invert a voltage applied to said liquid crystal soon after each said selection pulse is applied to said common electrode.

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11. (Original) The method for driving a nematic liquid crystal according to Claim 8, further comprising means for heating said nematic liquid crystal to a predetermined temperature.

12. (Original) The method for driving a nematic liquid crystal according to Claim 10, further comprising means for heating said nematic liquid crystal to a predetermined temperature.

13. (Original) A system for driving a nematic liquid crystal in a liquid crystal display device in which the nematic liquid crystal is confined between a common electrode and a segment electrode that are placed between two polarizing plates, comprising:

means for applying a sequence of selection pulses to said common electrode;

means responsive to said selection pulses to apply to said segment electrode a voltage corresponding to image data to be displayed; and

means for applying a voltage for displaying black to said segment electrode independently from the image data in response to intervals of said selection pulses.

14. (Original) The system for driving a nematic liquid crystal according to Claim 13, further comprising means for heating said nematic liquid crystal to a predetermined temperature.

15. (Original) The system for driving a nematic liquid crystal of Claim 13, wherein said nematic liquid crystal comprises a simple matrix nematic liquid crystal in a liquid crystal display device.

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16. (Original) The system for driving a nematic liquid crystal of Claim 13, wherein said nematic liquid crystal has the electro-optical characteristics that cause transmittance of said display device to change substantially linearly in response to an applied voltage level.

17. (Original) A system for driving a nematic liquid crystal in a liquid crystal display device in which the nematic liquid crystal is confined between a common electrode and a segment electrode that are placed between two polarizing plates, comprising:

means for applying to said liquid crystal a voltage of a value corresponding to image data to be displayed;

means for applying a constant voltage to said liquid crystal;

means for switching application of said constant voltage and application of said voltage corresponding to image data to

be displayed in a predetermined cycle; ratio of length of time for which said constant voltage is applied relative to length of time for which said voltage corresponding to image data to be displayed being constant;

one of said constant voltage and said voltage corresponding to image data to be displayed being applied to said liquid crystal after said voltages are switched; and

said nematic liquid crystal having electro-optical characteristics that cause transmittance of said display device to change substantially linearly in response to an applied voltage level.

18. (Original) The system for driving a nematic liquid crystal according to Claim 17, wherein said liquid crystal has said characteristics at least in a substantial operation range thereof.

19. (New) A method for driving a nematic liquid crystal in a liquid crystal display device comprising a nematic crystal having no prior hysteresis, two electrodes sandwiching the nematic liquid crystal and two polarizing plates sandwiching the two electrodes, comprising the steps of:

applying a first voltage corresponding to image data and a second voltage of a predetermined value independent from the image data between said two electrodes while switching one to the other within each of unit periods, said unit periods repeating periodically, said first voltage being applied in a first time zone of each said unit period and said second voltage being applied in a second separate time zone of the same unit period,

wherein the proportion between the first time zone and the second time zone in each said unit period is constant in all said unit periods.

20. (New) The method according to Claim 19, wherein the first voltage is applied in the first time zone of each said unit period to display an image on a panel of said liquid crystal display device, and the second voltage is applied in the second time zone of the same unit period to erase the image on the panel within the second time zone.

21. (New) The method according to Claim 20, wherein erasure of the image displayed on the panel is effected by driving the liquid crystal to display black on the panel.

22. (New) The method according to Claim 19, wherein the liquid crystal is driven to a state corresponding to the image data by the first voltage applied in the first time zone of each said unit period, and the nematic liquid crystal is driven to return to a predetermined state by the second voltage applied in the second time zone of the same unit period.

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23. (New) The method according to Claim 22, wherein the predetermined state of the nematic liquid crystal is a state displaying substantially black on the panel.

24. (New) The method according to Claim 20, wherein the liquid crystal display device is normally black and the second voltage is zero volts.

25. (New) A method of driving a liquid crystal display device, comprising:

applying a voltage corresponding to image data for each pixel to display on a TFT liquid crystal panel in each of unit periods; and

applying a predetermined voltage for each pixel to erase the image on the TFT liquid crystal panel in the same unit period.

26. (New) The method according to Claim 25, wherein the erasure of the image on the TFT liquid crystal panel is effected by darkening the TFT liquid crystal panel to substantially black.

27. (New) An image display method in a liquid crystal display device including a matrix liquid crystal panel using a nematic liquid crystal, comprising:

applying a voltage corresponding to image data to the liquid crystal in a first time zone in a unit period; and

applying a voltage having a predetermined potential and independent from the image data to the liquid crystal in a second time zone different from the first time zone in the same unit period.

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28. (New) The method according to Claim 27, wherein the matrix liquid crystal panel is a simple matrix liquid crystal panel.

29. (New) The method according to Claim 27, wherein the matrix liquid crystal panel is a TFT liquid crystal panel.